

March 20, 1986

NOAA DIVING SAFETY BULLETIN #86-1

MEMORANDUM FOR: ALL NOAA DIVERS

FROM: J. Morgan Wells
NOAA Diving Coordinator

SUBJECT: 1. Submersible Pressure Gauge Failure
2. Poseidon Regulator Hose Failures
3. SPG Test Gauges
4. Variable Volume Dry Suit Sizes

SUBMERSIBLE PRESSURE GAUGE FAILURE

During a recent training class, a submersible pressure gauge (SPG) failed, forcing a student into a buddy breathing ascent. Prior to the dive, the gauge was working correctly, but had a screw loose inside the dial. This seemingly innocuous piece of hardware jammed the needle at 1600 psi. (see fig. 1) and, as a result, the diver breathed his tank empty (without knowing it. It speaks well for the student and that he was able to handle this "real world" emergency, and for his buddy, who was nearby and prepared to help out as he should have been.

The incident would have been avoided completely if an attentive inspector had removed the equipment from service. All personnel involved in a diving operation must learn to be aware of what's going on and not to use questionable equipment.

POSEIDON REGULATOR HOSE FAILURES

A student in a recent class arrived equipped with a "new" Poseidon regulator. Inspection of the hose by the class instructors revealed that the hose was of a defective design that had been recalled in 1979. In addition, the hose was already pulled part way off the fitting.

Fortunately this defective hose was caught before any problems developed. The diver had recently purchased the regulator and had no idea that there could be a problem. It is possible that, although the regulator was new, a hose had been installed from stock that was from the defective issue of hoses.

NOAA Diving Safety Bulletin 79-2 and 79-3 addressed regulator and dry-suit inflator hose failures on Poseidon regulators. Bulletin 79-3 specifically addressed how to recognize the defective issue hoses. All NOAA divers are directed to review these bulletins and inspect any Poseidon hoses that may be received from dive shops. Although most shops have disposed of any defective hoses, there are obviously a few still out there.

SPG TEST GAUGES

The NDP Diving Equipment Worker, Steve Urick, is preparing Submersible Pressure Gauge (SPG) Testers to be distributed throughout the program. Since SPG failure can cause serious diving accidents, it has been determined that the need exists to require each divemaster to test the SPG's in his charge on a regular basis. Procedures will be included with the units and Steve plans to have the testers shipped by the end of March. An illustration of a SPG tester is included as figure 2.

VARIABLE VOLUME DRY SUIT SIZES

The last few years have show a shift to Variable Volume Dry Suits as the standard diving suit used by NOAA Divers outside of tropical waters. This has resulted in a much wider assortment of people being trained in the use of dry suits and using them in the field. A problem that is being addressed by the NDP at this time is providing properly sized dry suits for small divers. A final resolution has not been found, but the following reminder is important. The variable volume dry suit need to fit the diver reasonably well in order for that diver to perform his/her task safely. Safety is the operative word in this warning! The NOAA Diving Regulations require that both divers and divemasters ensure that the equipment and operation are safe. In other words, don't dive in a suit that fits so poorly as to endanger your ability to control that suit!

Unit Diving Supervisors are directed to ensure that each NOAA diver in their unit is given access to this bulletin. Any information that has an impact upon the safety of NOAA divers should be brought to the attention of the NOAA Diving Coordinator by the fastest means.

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